

REMARKS

This responds to the Office Action mailed September 9, 2004. A Petition for a THREE MONTH extension of time and the appropriate fee accompanies this paper.

Claims 1-48 are pending, claim 49 having been canceled by this Amendment. In the Office Action, claim 21 was objected to for improper dependent form. Claims 1-49 were rejected, pursuant to 35 U.S.C. §103, for obviousness over Grasso, et al., U.S. Pat. No. 5,355,250 ("Grasso"), in view of Czarnocha et al., U.S. Pat. No. 6,504,630 ("Czarnocha").

OBJECTION TO CLAIM 21

With respect to the objection to claim 21, the Examiner is thanked for catching this erroneous deletion of the "9" from the intended reference to claim "19". Claim 21 has been amended to correct the error. Accordingly, withdrawal of the objection to claim 21 is respectfully requested.

ART REJECTIONS

Claims 1-48 stand rejected for obviousness over Grasso in view of Czarnocha. The rejections are respectfully traversed for the following reasons.

The Office Action correctly acknowledges that Grasso fails to teach an optical transceiver having at least two photodiodes and at least two transmitters. Accordingly, in order to make out its obviousness case, the Office Action alleges Czarnocha discloses "at least two photodiodes and at least two laser transmitters citing, *inter alia*, FIGS. 1, 6 & 7 and some associated text description. However, review of FIG. 1 and the associated text describing either element 110 or element 120 indicates that the disclosure of FIG. 1 is like Grasso in that it too, "fails to teach an optical transceiver having at least two photodiodes and at least two transmitters." Thus, the disclosure surrounding FIG. 1 can no more render the instant claims obvious than Grasso can.

With respect to the disclosure of FIG. 6, there is only one output transmitter, because the “output” is the line between the output multiplexer 611 and the amplifier 612, and there is only one receiver (i.e. there is only one line (631) entering demultiplexer 617). Thus, even as between the two illustrated network elements (601, 602) each individual network element has only two channels total – a transmit channel (630) and a receive channel (631).

With respect to the disclosure of FIG. 7, it appears that it is similar to the disclosure of FIG. 6, except that an optical amplifier (703) is used on the receive side. It is unclear from the description exactly how FIG. 7 fits into the overall scheme, but clearly it is done in one of two ways and neither obviates the flaw of FIG. 6. With respect to the disclosure of FIG. 7, either it is the same as taking, for example, the optical amplifier (612) of FIG. 6 and shifting it down the line (630) so that it resides in the downstream network element (602) or it is analogous to adding an additional optical amplifier to, for example, the line 630 in element 602 (i.e. the optical amplifier (612) on the transmit side would still remain so there would be two optical amplifiers, one at each end of line 630). In either case, there would still only be one channel involved as evidenced by the single line entering the optical amplifier (703) of the network element (701) of FIG. 7. In short, both Grasso and Czarnocha only have two channels, one transmit channel and one receive channel.

In contrast, the invention of independent claims 1, 11, 19, 22, 25, 31, 39, 40, 44, 45 all have at least three channels – a transmit channel and at least two receive channels (one of which potentially being used for eye safety/fault handling). Thus, while at least one of the receive channel is used to provide the specified protection from exposure to an unsafe level of laser energy, the second receive channel can: i) be used for some other purpose, or ii) also be used to provide the specified protection from exposure to an unsafe level of laser energy, whether as a

redundant or backup channel or in conjunction with the first. Moreover, to the extent that more than two receive channels are present, greater flexibility is potentially possible.

Although believed substantively unnecessary in light of Applicants' disclosure which, in context, equates photodetectors or receivers with channels, claims 1, 11, 31, 39, 44 and 45 have been amended to use the single term channel or channels and thereby bring them into consistency with each other in terms of terminology. It is respectfully believed that this amendment is not intended to change the scope of any of those claims and it is respectfully submitted that the claims define over the cited art without the amendment for the reasons stated above and thus this shift in terminology is for convenience and not for any purpose related to patentability.

In addition, claims 19, 22 and 25 have been amended to add reference to multiple "receiver channels" or "receiving channels".

Accordingly, for the reasons set forth above, it is respectfully submitted that independent claims 1, 11, 19, 22, 25, 31, 39, 44 and 45 are all allowable over any legitimate combination of Grasso and Czarnocha and early favorable action in that regard is respectfully requested.

Claims 2-10, 12-18, 20-21, 23-24, 26-30, and 32-38 are all dependent claims which depend, directly or indirectly, from one of allowable claims 1, 11, 19, 22, 25, 31, 39, 44 and 45 and therefore, are allowable for the same reasons.

With respect to independent claim 40, as well as dependent claims 12-15, 20, 21, 32-38 and 41-43, the Office Action alleges that Czarnocha discloses "at least two partitions" citing Figs 1, 6 and 7. That assertion is respectfully traversed. Different partitioning variants are described in the instant application at pages 15-17 and 20-22. Nothing in Czarnocha discloses partitioning (physical or logical) as that term is used in the instant application. Indeed, it is difficult to

understand how the Office Action can make the assertion at all given that there is never more than one transmit channel or one receive channel disclosed in Czarnocha at all.

Accordingly, withdrawal of the rejection of independent claim 40 is respectfully requested. In addition, since 12-15, 20, 21, 32-38 and 41-43 all involve partitioning, it is respectfully submitted that those dependent claims are all allowable for this separate and independent reason and early, favorable action in that regard is respectfully requested. However, in the event the Office Action would persist in the rejection of independent claim 40 or any of dependent claims 12-15, 20, 21, 32-38 or 41-43 based upon an alleged disclosure by Czarnocha of partitioning, further detailed elaboration is requested so that a fair assessment of the Office Action position can be made.

Finally, it is respectfully submitted that the Office Action has improperly rejected each of the following claims for reasons separate from and independent of those reasons raised above with respect to the receiver channels. Each such additional, independent reason is thus raised in connection with the particular claim as follows.

Claim 1 recites “at least two laser transmitters”. As noted above, as with the receive channels, each network element of Czarnocha only has one laser transmitter due to the use of a multiplexer. Thus, Czarnocha does not supply this aspect which the Office Action acknowledges to be missing from Grasso.

Consequently, without belaboring the point, those claims dependent from claim 1 are also allowable for the same reason.

In addition, dependent claim 4 recites “the received optical data signal comprises a clock.” This aspect is not addressed by the Office Action and is independently lacking from the applied art. Claim 4 is therefore independently allowable for this independent reason.

Dependent claim 5 recites that “the monitoring is on a window of time basis.” This aspect is not addressed by the Office Action and is independently lacking from the applied art. Claim 5 is therefore independently allowable for this independent reason.

Claim 6 depends from claim 5 and is therefore allowable for the same independent reason. In addition, claim 6 recites that “the determining occurs for a window of time.” This aspect is also not addressed by the Office Action and is independently lacking from the applied art. Claim 6 is therefore independently allowable for this additional independent reason.

Claim 10 recites “after the shut down, cycling through the shut down laser transmitters.” The recited “cycling” is not addressed by the Office Action and is independently lacking from the applied art. Moreover, lacking multiple transmitters, it is difficult if not impossible to conceive of how the recited “cycling” could occur. Claim 10 is therefore independently allowable for this independent reason.

As with claim 1, independent claim 11 recites “multiple laser transmitters” and, as noted above, that aspect is wholly lacking from the cited art. Thus, independent claim 11 and those claims depending directly or indirectly from it are all allowable for this separate and independent reason.

Moreover, dependent claim 15 specifically recites that the partitioning (the allowability of which *per se* is addressed above) “is based upon a maximum permissible exposure level.” That aspect is separately and independently lacking from the cited art. Accordingly, claim 15 is therefore independently allowable for this additional independent reason.

As with independent claims 1 and 11, independent claim 19 recites “multiple transmit channels” and is thus independently allowable for analogous reasons as are those claims dependent from claim 19.

Moreover, dependent claim 20 specifically recites that “at least some of the multiple transmit channels are in a first partition and others of the multiple transmit channels are in a second partition.” This aspect is not addressed by the Office Action and is independently lacking from the applied art. Claim 20 is therefore also independently allowable for this independent reason.

Dependent claim 21 (as corrected) depends from claim 20 and is thus independently allowable for the same reason. In addition, claim 21 further recites that “the method of claim 19 is only performed in the first partition.” In other words, the method of claim 19 is unequivocally NOT performed in the “second partition” (i.e. they operate differently). This aspect is also not addressed by the Office Action and is independently lacking from the applied art. Claim 21 is therefore also independently allowable for this independent reason.

Dependent claims 27-29 each respectively specifically recite that the “specified condition” is:

- a) “transitions within a window of time” (claim 27);
- b) “a pattern mismatch” (claim 28); and
- c) “a loss of a clock signal embedded in a data signal” (claim 29).

These aspects are also not addressed by the Office Action and are independently lacking from the applied art. Thus, each of claims 27-29 are therefore independently allowable for these distinct and independent reasons.

Dependent claim 43 specifically recites that “the activity monitoring unit comprises a state machine.” This aspect is also not addressed by the Office Action and is independently lacking from the applied art. Claim 43 is therefore also independently allowable for this independent reason.

Dependent claims 46-48 each specifically involve “cycling,” an aspect previously identified as lacking in connection with claim 10. Since the recited “cycling” is not addressed by the Office Action and is independently lacking from the applied art, those aspects related to cycling added by claims 46-48 must necessarily also be lacking. Claims 46-48 are therefore each independently allowable based upon the lack of any “cycling” and furthermore are allowable based upon the additional further cycling-related aspects specified therein.

Accordingly, it is respectfully submitted that all of the pending claims are allowable for at least the above reasons and early favorable action in that regard is respectfully solicited.

CONCLUSION

Based on the foregoing, reconsideration and allowance of this application is respectfully requested. In the event any issues remain and the Examiner believes they could potentially be resolved as part of a telephone conversation, the Examiner is urged to contact the undersigned at the phone number indicated.

The Commissioner is authorized to charge any additional fees required for the extension of time or consideration of this Amendment on the merits to Deposit Account No. 13-4500, Order No. 4024-4006.

Respectfully submitted,

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